

Appl. No. 09/374,502
Amdt. Dated May 4, 2004
Reply to Office Action of December 4, 2003

REMARKS/ARGUMENTS

Claims 32-40 remain in the application.

A Petition for Extension of Time to extend the period for response two months, including the appropriate fee, is filed herewith.

A. Allowable Subject Matter

The indicated allowability of claims 32 and 33 has been withdrawn by the Office in view of U.S. Patent No. 6,455,912 issue September 24, 2002 to Hyeon-Seag Kim and Sunil Mchta (hereinafter "the Kim Patent").

Claim 34-40 are allowed.

B. 35 U.S.C. § 103(a) – Kim and Puchner Claims 32 and 33

Claims 32 and 33 stand rejected under 35 U.S.C. § 103(a) as being obvious over the Kim patent in view of U.S. Patent No. 6,144,076 issued November 7, 2000 to Puchner, et al. (hereinafter "the Puchner patent") (Office Action, pages 2-3).

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must

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both be found in the prior art, and not based on applicant's disclosure. *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The Office Action contends that the Kim patent discloses "STI regions surrounding an active area (column 1, lines 29-33), but does not expressly disclose the active area comprising nMOS transistors". The Office Action relies on the Puchner patent for a disclosure of "STI regions (10) surrounding nMOS and pMOS transistors." Then, contends that "[i]t would have been obvious for one skilled in the art at the time of the invention to use nMOS and pMOS transistors as disclosed by Puchner for the active area of Kim". However, that is not the limitations in claim 32. Claim 32 requires both an n-type source region and an n-type drain region. Neither the Puchner patent nor the Kim patent, either alone or in combination, teach or suggest this. For a prima facie case for obviousness, "the prior art reference (or references when combined) must teach or suggest **all** the claim limitations" (emphasis added).

With regard to claim 33, the Office Action contends that the Puchner patent teaches a trench depth over the width of the active area is greater than about 0.5. The Office cites column 2, lines 60 through column 3, line 8, as teaching such as ratio, simply because that portion of the Puchner patent teach that the depth of the trench can be varied. However, the Puchner patent does not discuss the width of the active area, much less a ratio between the trench and width of the active area being greater than about 0.5. Again for a prima facie case for obviousness, "the prior art reference (or references when combined) must teach or suggest **all** the claim limitations" (emphasis added). The Puchner patent, either alone or in combination with the Kim patent, does not teach or suggest such a ratio.

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Thus, Applicants respectfully request reconsideration and withdrawal of the Section 103(a) rejection of claims 32 and 33.

C. 35 U.S.C. § 102(e) – Kim – Claim 32

Claim 32 stand rejected under 35 U.S.C. § 102(e) as being anticipated by the Kim patent (Office Action, page 3).

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Although the Office Action asserts that Kim patent anticipates claim 32, the Office Action admits at page 3 that the Kim patent “does not expressly disclose the active area comprising nMOS transistors.” Therefore, since claim 32 requires nMOS transistors, the present rejection is without merit. Thus, Applicants respectfully request reconsideration and withdrawal of the Section 102(e) rejection of claim 32.

In view of the foregoing remarks, the Applicants request favorable consideration and allowance of the application.

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Please forward further communications to the address of record. If the Examiner needs to contact the below-signed attorney to further the prosecution of the application, the contact number is (208) 433-9217.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Robert G. Winkle", is written over a horizontal line.

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Dated: May 4, 2004